

***FlyBy Math™* Alignment**  
**Academic Content Standards - Mathematics**  
**Grade-Level Indicators**

**Number, Number Sense and Operations Standard**

***Computation and Estimation***

<b>Grade-Level Indicator</b>	<b><i>FlyBy Math™</i> Activities</b>
14. Use proportional reasoning, ratios and percents to represent problem situations and determine the reasonableness of solutions.	<p>--Represent distance, speed, and time relationship for constant speed cases using tables, bar graphs, line graphs, equations, and a Cartesian coordinate system.</p> <p>--Use graphs to compare airspace scenarios for both the same and different starting conditions and the same and different constant (fixed) rates.</p>

**Patterns, Functions and Algebra Standard**

***Use Patterns, Relations and Functions***

<b>Grade-Level Indicator</b>	<b><i>FlyBy Math™</i> Activities</b>
1. Represent and analyze patterns, rules and functions, using physical materials, tables and graphs.	<p>--Represent distance, speed, and time relationship for constant speed cases using tables, bar graphs, line graphs, equations, and a Cartesian coordinate system.</p> <p>--Use tables, bar graphs, line graphs, equations, and a Cartesian coordinate system to draw conclusions.</p>

***Use Algebraic Representation***

<b>Grade-Level Indicator</b>	<b><i>FlyBy Math™</i> Activities</b>
5. Produce and interpret graphs that represent the relationship between two variables.	--Use tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.
6. Evaluate simple expressions by replacing variables with given values, and use formulas in problem-solving situations.	--Use the distance-rate-time formula to predict and analyze aircraft conflicts.

***Analyze Change***

<b>Grade-Level Indicator</b>	<b><i>FlyBy Math™</i> Activities</b>
7. Identify and describe situations with constant or varying rates of change, and compare them.	--Use graphs to compare airspace scenarios for both the same and different starting conditions and the same and different constant (fixed) rates.

## Data Analysis and Probability Standard

### Data Collection

Grade-Level Indicator	FlyBy Math™ Activities
1. Read, construct and interpret line graphs, circle graphs and histograms.	--Plot points on a schematic of a jet route, on a vertical line graph, and on a Cartesian coordinate system to describe the motion of two airplanes.  --Represent distance, rate, and time data using tables, line plots, bar graphs, and line graphs.
2. Select, create and use graphical representations that are appropriate for the type of data collected.	--Choose among tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.
3. Compare representations of the same data in different types of graphs, such as a bar graph and circle graph.	--Represent distance, rate, and time data using tables, line plots, bar graphs, and line graphs.